
REMARKS

Applicant's representative has reviewed and considered the Office action mailed on October 1, 2003 and the references cited therewith.

Claims 1, 3-17, and 23-60 are now pending in the above-referenced application.

§102 Rejection of the Claims

Claims 1, 3-8, 11, 15-17, 23-30, and 48-54 were rejected under 35 U.S.C. § 102(b) (paragraph 2 of the Office action) as being anticipated by Huang *et al.* (U.S. Patent No. 6,069,066). Applicant does not admit that Huang *et al.* is prior art and reserves the right, as provided for under 37 C.F.R. 1.131, to "swear behind" Huang *et al.* Applicant respectfully traverses the rejection of claims 1, 3-8, 11, 15-17, 23-30, and 48-54 under 35 U.S.C. § 102(b).

The Huang *et al.* patent issued on May 30, 2000. Applicant filed the above referenced patent application on September 2, 1999. Since Huang *et al.* did not issue more than one year prior to the filing date of applicants' patent application, Huang *et al.* is not a valid 102(b) reference. Thus, the office action fails to state a *prima facie* case of anticipation with respect to claims 1, 3-8, 11, 15-17, 23-30, and 48-54. Therefore, applicant requests withdrawal of the rejections and reconsideration and allowance of claims 1, 3-8, 11, 14-17, 23-30, and 48-54.

§103 Rejection of the Claims

Claims 14, 31-47, and 55-60

Claims 14, 31-47, and 55-60 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang *et al.* Applicant does not admit that Huang *et al.* is prior art and reserves the right, as provided for under 37 C.F.R. 1.131., to "swear behind" Huang *et al.* Applicant respectfully traverses the rejections of claims 14, 31-47, and 55-60.

Applicant respectfully objects to the taking of official notice (paragraph 10 of the Office action) in a single reference obviousness rejection and, pursuant to M.P.E.P. § 2144.03, applicant traverses the assertion of official notice and requests that the Examiner cite a reference that teaches the missing elements. If the Examiner cannot cite a reference that teaches the missing elements, applicant respectfully requests that the Examiner provide an affidavit describing how the missing elements are present in the prior art. If the examiner cannot cite a reference or provide an affidavit, applicant requests withdrawal of the rejections and reconsideration and allowance of claims 14, 31-47, and 55-60.

Claims 9, 10, 12, and 13

Claims 9, 10, 12, and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang *et al.* in combination with Yost *et al.* (U.S. Patent No. 5,444,018). Applicant does not admit that Huang *et al.* is prior art and reserves the right, as provided for under 37 C.F.R. 1.131 to "swear behind" Huang *et al.* Applicant respectfully traverses the rejections of claims 9, 10, 12, and 13.

The office action must provide specific, objective evidence of record for a finding of a teaching, suggestion or motivation to combine reference teachings and must explain the reasoning by which the evidence is deemed to support such a finding. *In re Sang Su Lee*, 277 F.3d 1338 (Fed. Cir. 2002). The office action, in an attempt to meet this requirement, in paragraph 15 states: "It would have been obvious to one of ordinary skill in the art to incorporate the contact structure of Huang with the logic interconnect structure of Yost in order to provide a contact structure as required by Yost (Abstract)." Applicant respectfully submits that Examiner's reliance on "obviousness" as the teaching motivation, or suggestion to combine the references does not meet the standard set out by *In re Sang Su Lee*. Applicant respectfully submits that Yost *et al.* includes a contact structure that includes titanium and tungsten. Yost *et al.* does not suggest that there are any deficiencies in this contact structure, so rather than providing a teaching, suggestion,

or motivation to combine, Yost *et al.* provides a teaching that the contact structure described in Yost *et al.* is sufficient. Thus, the Office action fails to meet the standard established by *In re Sang Su Lee* for finding a teaching, suggestion, or motivation to combine the reference teachings. Thus, the Office action fails to state a *prima facie* case of obviousness with respect to claims 9, 10, 12, and 13. Therefore, applicant requests withdrawal of the rejections and reconsideration and allowance of claims 9, 10, 12, and 13.

Even assuming *arguendo* that Huang *et al.* and Yost *et al.* are not improperly combined, the Office action still fails to state a *prima facie* case of obviousness with respect to claims 9, 10, 12, and 13.

Claim 9 is dependent on claim 8. Claims 12 and 13 are dependent on claim 11. Claims 8, 10, and 11 recite, a trench having a depth greater than "a critical depth." In contrast, in the Abstract, Huang *et al.* recites, "An inter-metal dielectric layer with a trench is formed on the multi-metal layer." Hence Huang *et al.* fails to teach or suggest a "critical "depth" for the trench. Also, in contrast, in the Abstract, Yost *et al.* recites, "Depositing titanium by collimation places sufficient metal into high aspect ratio contacts to make good electrical connection." Hence Yost *et al.* fails to teach or suggest a "critical depth" for a trench. Thus, the Office action fails to state a *prima facie* case of obviousness with respect to claims 9, 10, 12, and 13. Therefore, applicant requests withdrawal of the rejections and reconsideration and allowance of claims 9, 10, 12, and 13.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone applicant's attorney at 612-371-2109 to facilitate prosecution of the application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743

Respectfully submitted,

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January 2, 2004

By

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CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 2nd day of January, 2004.

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Signature